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PERSONAL AND DOMESTIC HYGIENE,

SHOWING

THE VALUE OF SANITARY LAWS.

ADDRESSED

Especially to the Working Classes.

BY

LIONEL J. BEALE, SURGEON,

AUTHOR OF "THE LAWS OF HEALTH," ETC.

LONDON:

JOHN CHURCHILL, NEW BURLINGTON STREET.

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LONDON :

G. J. PALMER, SAVOY STREET, STRAND.

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WHILE acting as a district officer of health for the parish of St. Martin's during the various outbreaks of cholera, I had ample opportunity of observing the habits and customs of a large portion of the community in their domestic arrangements, and, as far as these are concerned, in the preservation of health and the prevention of disease, the remarks I have to make may, I hope, be of some use. Nobody can question the good to be done for the health of the general public by legislative means ; but, at the same time, every individual must do a great deal, personally, in the practical application of the laws of health, or acts of parliament on this subject will be no better than waste paper.

Health, both of mind and body, is more dependant on our own will, and our own actions, than is usually thought ; all are liable to attacks from epidemic, contagious, and other diseases, but those who take ordinary care of their health best resist the influence of the causes which engender diseases, and, when attacked by them, most readily recover. The returns of the Registrar-General show that the victims of cholera were as much among those who neglected their health as among those who, unhappily, were obliged to live in unhealthy places. It is notorious to all

medical men, that the cleaner and the better kept houses in the most infected districts were those in which the mortality was the least ; and it is equally notorious that persons of the most equable minds, who are temperate in their habits, mentally, morally, and physically, are the least frequent victims of epidemic diseases. As a general rule, then, it may be asserted, that upon our own conduct and management will depend our preservation of health, exemption from disease, and length of life.

The principal sources of good health are cleanliness of the person and the habitation, the taking of wholesome food into the stomach, and of pure air to the lungs ; those who will be at the pains of learning a few of the laws of the animal economy in relation to these subjects, and of practically applying them, will be best able to resist disease in any shape. I ought to add, that a well-regulated mind is an essential ingredient of bodily health, but the truth is, that an unflinching application of the laws of health will have a great tendency to generate such habits of thinking as will lay the foundation for a well-disciplined mind. "Cleanliness is next to godliness," says an old English proverb, and attention to our present subject verifies it, for no one can give his attention to those physiological laws which are connected with the subject of Hygiene, without frequent reference to that Great Intelligence, in whom we live, and move, and have our being. The physiology of health is very intimately connected with the philosophy of mind, and although these are high sounding terms, yet I believe that the subject is one that may be so simply explained, "that he who runs may read."

The lungs, the stomach, and the skin, are the principal organs upon which depend the state of our health and our liability to disease. I shall, therefore, say a little on the physiology of each, for it is necessary to understand what they are intended to do in their normal or natural state, and then apply our knowledge to prevent them from degenerating into an unnatural or diseased state.

The lungs may be considered as large bags of cells, which are constantly receiving fresh air and expelling that which has been applied to the purposes of the animal economy. The air we breathe is a mixture of two gases, oxygen and nitrogen, the first

of which is essential to the existence of animal life, no animal can continue to exist without a due supply of oxygen gas, and the higher the animal in the scale of creation the greater is the amount of oxygen* required. Reptiles, for example, consume less than birds. Whatever consumes the oxygen of a given quantity of atmospheric air, tends to the rendering it the less fit for animal life; fire, as well as life, is supported by the aid of oxygen gas, and wherever fires or lights are burning there is more or less rapid consumption of vital air. The combination of fire, lights, and human beings, in one room, however large, soon renders the air unfit for the support of life; hence the feelings we experience in a theatre or other crowded assembly, and continuance in such an atmosphere is actually destructive of life, as in the well-known example of the black hole of Calcutta, where, in one night, out of 146 who were shut up, 123 were found dead in the morning. The ventilation of factories and rooms is, therefore, one of the most important laws of health; in this respect the working classes are especially sufferers, for the too common necessity of a whole family inhabiting one room is the source of bad health, both in parents and children. Of the two evils, it is better to run the risk of cold, by open windows, than to continue breathing the same air, which, in a small room, is soon rendered unfit for respiration. In such a room the most distant window should be open at the top, winter and summer, the amount of opening to be regulated by the weather: a good expedient is to remove one or two panes of glass, and substitute for them perforated zinc, or fine wire, by this means you get fresh air without a draught. But there is little to fear from open windows, and those who will try the experiment will find themselves less liable to catch cold than those who are always shut up in a close room. There is nothing more injurious to health than what is called a snug warm room, where there is no chink to let in the fresh air. Many cases of consumption may be traced to the habit of a large family shutting themselves up in a snug room for a whole winter's evening: girls, in such cases, are the most frequent victims, because the males of the family are, from business or for pleasure, obliged to be much in the open air.

* Formerly called vital air, from its power to support life.

The stomach is a large pouch, or bag, with which all the higher animals are provided for the reception of their food. It is more or less complicated, in the various classes of animals ; the more remote the nature of the food employed is from the structure of the animal, the more complicated are the digestive organs ; hence vegetable feeders have more complex stomachs than animal feeders ; the stomach of the grass-eating ox is much more so than that of the lion or cat, while feeders on grains or seeds have a stomach of an intermediate kind. The first process of digestion is mastication ; when we have well divided our food with our teeth we swallow it, and it goes into the stomach, where it undergoes certain changes to fit it for blood, the essential principle of all digestion being to convert food into blood. After the food has been moved about in the stomach, and well mixed with its juices, undergoing some process analogous to fermentation, it passes into the small intestines, where it is mixed with bile from the liver, &c., and continues to undergo change. On the inner coat of the stomach and intestines are small vessels which select those particles of the food which have been duly digested, and carry them into the blood, to repair our daily losses from bodily exercise and mental employment. But before the new blood is fit for the support of vitality it requires to be exposed to the atmospheric air, which we breathe by our lungs. Here a new action occurs, by which the oxygen of the air mingles with the blood, and performs a most important part in the animal economy, by its circulation with the blood to every part of the frame.

The importance of the action of the stomach, in regard to health, must be very obvious, and those who enjoy the best health either have very powerful stomachs, or are the most careful only to supply them with suitable food, both in quality and quantity. I believe people err quite as much in the quantity of food they take as in the quality—there are very few of us who do not eat more than is necessary ; as a general rule, an adult man, whose work is not excessive, will do well on sixteen ounces of bread, and six to eight ounces of cooked meat, a-day. By taking too much food at one time the action of the stomach is impeded, and it cannot convert all the food taken into wholesome nutriment. A moderate quantity of food, taken in three

meals, at intervals of about five or six hours, is much more wholesome than one very full meal. After making a good dinner of meat, vegetables, and bread, it is unnecessary to lay on the top of it a quantity of pie or pudding ; this is a very frequent cause of indigestion. There can be no harm in dining, occasionally, on a wholesome pudding, but it is wrong to make a full meal of meat, &c., if we mean to add pudding or pie, for by this means we overload the stomach. It is quite right to give children pudding for dinner, but then they should have no meat ; the occasional intervention of one or two days of spare diet, every week, is good for people of all ages.

In its healthy condition we do not feel that we have a stomach, we ought not to feel that we have a heart, a stomach, or any internal organ, for when their functions are duly performed they transmit no sensations, but the moment they are deranged or disordered, we have information of the fact, by some uneasiness. When we take a proper quantity of food the stomach digests it, and we feel nothing, but if we overload it, or take food of an improper kind, we are soon inconvenienced, by fulness, flatulence, or pain : to feel that we have a stomach is certain evidence of its derangement. As in its healthy action the stomach provides the elements of the blood, and generates nourishment, health, and vigour, both to mind and body, so in a disordered state it is the primary source, the mother of all disease. The infectious poisons of fever, cholera, &c., act most readily on those whose digestive organs are weak and depraved : we can best resist the causes of ordinary colds, perhaps we never catch cold, when the stomach is in good order. If we would prevent disease we should take care of our stomach ; if we supply it only with what is really necessary we shall suffer very little from disorders of any kind. The health of the blood, of that fluid destined to nourish every part of the body, the various organs, the muscles, the nerves, and the brain, is mainly dependant on the healthy action of the stomach, in separating from our food only those parts which are essential to the well-nourishment of the whole system. The entire constitution, the skin, the brain, the nerves, the lungs, and heart, the blood-vessels, the digestive organs themselves, every atom of our organism, are dependant on the soundness of

the primary process of assimilation, or that conversion of dead matter into vital tissue which begins in the stomach. The wonderful nature of the process by which a mutton-chop and bread are converted into blood, nerve, muscle, and bone, is as striking as that these processes should go on in a state of health for seventy or eighty years.

When we live in the open air our stomach will digest almost anything ; in a healthy part of the country, with sufficient occupation to be out of doors for many hours, it matters not much what food is taken. But when an inhabitant of a large, closely built town, where health has to struggle with many impediments, when the body is worn out, or the mind exhausted, by unceasing exertions, the treatment of the stomach becomes a matter of vast importance ; under such circumstances we should study what best agrees with us, and take of such a moderate quantity. By care in diet, and being much in the open air, the inhabitants of towns may preserve their health, even in a higher degree, than many inhabitants of a healthy country, for those who shut themselves up in a house from Sunday to Sunday, as well as those who eat and drink twice as much as is required, will have bad health whether they live in town or country.

Digestion and respiration are the processes by which materials, solid and fluid, when received into the animal body, are converted into substances for the nourishment of the tissues and the support of animal heat. Under all circumstances, whether in the frozen or torrid zone, by the process of respiration our bodies are retained at an equable temperature. The action of the air we breathe on the blood in the lungs, effects some chemical, or other change, by which the blood, as it circulates through the whole body, carries warmth to every part, and enables it to resist external influences ; this is supposed to be, in the main, dependant on the action of oxygen.

The substances required for the digestive and respiratory processes, may be arranged in four classes.

The aqueous : constituting four-fifths of the blood and a large proportion of all the solids.

The oleaginous and saccharine used in the production of animal heat, or, if in excess, laid up in fat cells for future use.

The albuminous : supporting the nervous and muscular systems, and the tissues composing the various organs of the animal frame.

The saline : which is found in greater or less quantity in all tissues.

These four classes, in due combination, compose the blood. The most suitable food is that in which the materials of life are compounded in due proportions. Deficiency or excess in any of these four principles is attended with corresponding evils to the healthy action of organs. The quantity and quality of the requisite food is modified by climate, season, age, habits, and occupation. Children, and persons much in the open air, require more food than adults and persons of sedentary habits : the animal heat is greater in the former, and the amount of food (or fuel) oxidized must be greater ; whereas, with the latter, the demand for food is smaller, from the slower combustion and the slower destruction of the muscular and other tissues.

In the composition of milk nature has pointed out the proportions of the necessary principles for nutrition and the production of heat. In this especial food for the young nature has combined albuminous, oily, and saccharine matter : the caseine, or cheese, is albuminous, the butter is a modification of oily fat, and the sugar of milk does not materially differ from ordinary sugar, while we also find in milk a due amount of earthy principles to furnish the solids of animals, together with a requisite quantity of water. It is very remarkable how exactly habit accords with chemical and physiological facts in relation to the wants of the system and the means of supplying them. Good wheaten bread contains, more nearly than any substance in common use, the proportions of plastic and of heat giving-materials to repair the waste of animal tissues and to support combustion, which are required, under the conditions of life, in the temperate climes of the earth. In cold weather we require, and have a keener desire, for fatty matter ; and the more we employ our muscular system the greater is the demand for such food as will supply the waste. In rice and potatoes the farinaceous and saccharine principles exist in such large proportions to the albuminous, that we require a very considerable quantity of such kind of aliment to extract a

sufficiency of nutritive matter, but if we mix with such a diet a small quantity of animal food, a similar combination takes place as exists in bread. The colder the climate the greater is the desire for fat to maintain the heat of the body by its combustion with oxygen. The Esquimaux are said to devour several pounds of blubber at a meal : while, in hot climates there is but little inclination for fatty matter.

All the materials of nutriment we take into the stomach require not only to be digested, but to be vitally as well as chemically changed by the action of respiration. Hence, we cannot enjoy good health unless we breathe good air, and nothing contributes more to bad health than living in hot ill-ventilated rooms, for all air that has been once respired is rendered unfit to be again used. In obedience to the laws which regulate the diffusion of gases, particles deleterious to animal life are removed and as constantly replaced by pure air ; but this can only take place when there are no impediments to free currents and circulation of the atmospheric particles. The more hours we spend without the house, in the course of the day, the better for our health ; this is self-evident, by comparing the persons whose occupations oblige them to live almost wholly in the air with those who spend most of their time in chambers, offices, or factories.

There is no truth more universally assented to, than that health is the most important object of our life, and the most valuable possession we can attain ; and yet, practically, there are few things about which people are so ill-informed, so indifferent, or so negligent. Experience of its loss appears necessary before an adequate value can be set on its possession, and we only find out its importance when we suffer from its derangement. A sound mind in a sound body is a very rare possession : the combination of an unsophisticated, unprejudiced mind, with a body unimpaired in physical power, ought to be more common if we were well instructed, and if education produced what ought to be its results—intellectual and moral powers, by which we could determine on the right pursuits of life, and by volition be capable of carrying them out.

The condition of the skin is very important in regard to health ;

every one is familiar with the fact that a horse is never in good condition, that is, in good health, unless his skin is soft, supple, and shining ; so it is with ourselves, we are not in good health unless our skin is clear, soft, and easily moved over the subjacent structures. When the skin can be with difficulty separated or moved over the limbs and body, when it is in that state which is known by the term *hidebound*, we are not in good health. The very means used to improve the condition of the skin improves the general health, and the washings, rubbings, and combings, which a good groom applies to his horse, does much to improve the health of the animal. To keep ourselves and our children in good health we should do as much for our skin as we do for that of our horses ; if children underwent a similar process few would suffer from bad health. I am afraid that, in spite of baths and washhouses, there are still many adults who never fairly wash the whole of their skin from one year's end to another. There is no one circumstance so conducive to sound health as daily ablution to the whole surface. The best plan is to sponge the whole body with cold water as soon as we are out of bed in the morning, winter and summer, and then to rub the body well with a coarse towel. Those with whom cold water disagrees should have a warm bath once a week, with good friction afterwards ; and I hope the general establishment of public baths will put it in the power of all classes to enjoy this great advantage. The establishment of baths is the greatest boon which modern civilization has yet given to the working classes ; after a heavy day's work nothing is so refreshing as a warm bath, and an incipient cold may very frequently be altogether checked by one. To keep children in health their skin should be washed every night with soap and water, and in the morning they should either be plunged into cold water or sponged all over, but this is a poor substitute for the plunging bath.

Having pointed out how much health depends on the lungs, the stomach, and the skin, I shall describe the best means of managing children, from birth upwards, in order to establish a sound constitution ; the general rules will be equally applicable to persons of all ages. We will suppose a child is born with fair average development, as the majority are, in very good health—

now, whether this shall improve or diminish, depends on management, for much of our happiness or misery in life depends upon the nursing of our first years. A good nurse will wash an infant with great patience and great care, and it requires much of both to do the office well, especially to an irritable and crying child : a good nurse, after thorough washing and drying, will spend some time in rubbing every part of the skin, body, and limbs, with her hands. With regard to dress, if everything is very loose, the form or materials signify little, the more simple and easy the adjustment the better is the dress. Some nurses still continue to bind babies too tightly ; the rapid growth of an infant, immediately after birth, requires that there should be no undue pressure on any part of its body. Children, well formed at birth, sometimes become narrow and pigeon-breasted, which I cannot help imputing partly to bandaging, although bad feeding and general bad management have much to do with it. The food of an infant, during the first three or four months, should be confined to the breast. How should a mother live to be a good nurse ? is a question often asked ; the proper reply is, to continue the same habits of eating and drinking which have best agreed with her health under ordinary circumstances. Many women double their allowance of beer, &c., sometimes on the plea that their appetite for food is bad, but nothing can be more injudicious, for the increase of the stimulant still further depresses the appetite for wholesome food. Every woman about to become a mother should pay great attention to her own health, by so doing she will best promote the health of her offspring, and fit herself for the better performance of her future duties. A sensible woman will at once see the wisdom of this, and will do everything to promote the welfare of her child ; how much she can do both before and after its birth is obvious. To those mothers who enjoy fair average health the general rules of food, air, and exercise, apply as under ordinary circumstances ; the habits which best agree in regard to diet, as much fresh air as possible, and regular exercise short of fatigue. For those who do not enjoy good health particular rules will be requisite in each case, and in all cases much may be done, for Nature herself has been so considerate that most women while nursing find their health improved.

When a child is three or four months old it is wise to begin to feed it once or twice in the day ; this relieves the nurse, habituates the child to a change of food, and facilitates much the future operation of weaning. The simplest preparations of good bread will, in most cases, be sufficient ; in very weak children beef-tea may be necessary, but all taste for cakes, sweets, fruit, beer, &c., should not be encouraged. We do occasionally meet with people who think that children of a few months should live much as they do themselves with no exception but in quantity. It is no uncommon thing to see a poor, ill-nourished, rickety child, the very picture of all that is wretched, who, as the mother informs us, "lives as we do ;" partakes of a little of everything—beer, unripe fruit, unwholesome cakes, bread reeking from the oven. It may be very amusing to see a child enjoying itself over such things, but the result will be weakness and disease to the child, anxiety and distress to the parents. The food of young children cannot be too simple : to found a good constitution in their children parents should watch with earnest care all the proceedings of the nursery. It is impossible to impress too strongly the necessity of inducing habits of regularity and method in the feeding of children ; of confining the food to those articles alone which are necessary for nutrition ; of avoiding all things that only pamper appetite, and teach children to eat for the sake of eating.

The principal rules to be observed in managing the health of children are regularity in feeding, careful washing night and morning, the most rigid attention to cleanliness, regular hours for sleep, and as much fresh air as possible. When a child has been weaned three meals in the day are sufficient, and these may be all of the same materials, for infants do not require much variety beyond milk and bread. It is a bad plan to be often changing the food of children ; no care should be spared to procure good food, the flour or bread should be the best of its kind. Much of the ordinary London bread is ill adapted for the stomach of a tender infant.

With very good management and rigid observance of the rules for feeding, clothing, air, and exercise, the evils that surround children in large cities may be alleviated. The kind of food must

be regulated by circumstances, some children requiring more animal food than others. Most children up to the age of seven would be sufficiently well nourished if only allowed meat on alternate days. Wholesome puddings are good, but a too farinaceous diet generates a loose lymphatic fullness instead of solid strength; and bad diet, with too much confinement produces a condition favourable to the development of scrofula. As a child advances in age the quantity of animal food should be increased, and after the age of seven or eight he should have one meal of animal food daily; and this constitutes the general rule for all ages, but I fear it is only a minority of mankind who can put it in practice, and happily health and strength may, to a considerable extent, be enjoyed even on a purely vegetable diet, provided good bread can be obtained. The relative quantities of vegetable and animal food must be regulated by individual experience. There is an old maxim that every one at the age of 40 is either a fool or a physician; this is quite true as applied to individual experience. Before the age of 40 all should have discovered what agrees and what disagrees with them, they should have found out the peculiarities of their own digestive organs, and the effect of all articles of food on their stomach and general health. All the particular laws of health, such as the effects of peculiar articles of food, cold bathing, the necessary amount of sleep, air, and exercise, should have been long known, so that everything injurious to health may be avoided; this, with regularity and temperance, and occasional abstinence, are the principal means to establish a sound constitution and long life.

The diet of children is of the greatest importance in connection with their health. Some people seem to think that any broken food, re-cooked meat, or heavy pudding, will do for the children; of all species of economy this is the most pernicious. It should be a rule that fresh meat in its simplest forms only should be given to children; cold meat is wholesome, while re-cooked meat is indigestible and bad. That all sauces, pickles, &c., which induce people to eat more than they want, should be entirely forbidden to young children. Light and good puddings are proper food, and may constitute the dinner, but when a child has eaten sufficient animal food and vegetables, the addition of pudding over-

loads the stomach and induces that fullness which is the prelude to disorder and indigestion. Good digestion is the primary foundation of a good constitution, so long as the stomach does its duty well and is only called upon to act on proper materials we need fear no disease that may occur. A child with a sound stomach and healthy digestion will easily shake off any disease by which it may be attacked, and all the usual diseases of children, such as measles and scarlatina are mild and transient in their effects in healthy children. In the intervals of meals children should be prevented from taking sweets and other trash, which kind friends and kind servants are too ready to furnish ; the increase of confectioners and sweet-shops is a bad omen for the health of the rising generation.

To establish a good constitution air and exercise are essential ; for perfect health a young child should almost live in the open air : a London garden with all its dirt is better than any room. Weather, unless very bad indeed, should be no excuse for confining children to the house, the streets and squares afford very good air if they cannot reach the parks. Children subjected to the disadvantages of a town life should be doubly guarded in respect to good and wholesome food, for we may all take greater liberties with our stomachs while enjoying the fresh and open air in a healthy part of the country, than when living in a close built town.

Much of the happiness of human life depends on the state of our health, and as the state of our health almost entirely depends on our own management of it, an acquaintance with Hygiene would necessarily increase the amount of human happiness. No doubt the great desideratum of life is that each individual should do his duty, for that alone is worthy the name of happiness in our present imperfect condition, which imparts the feeling that we are endeavouring to do the duties of that state or position in which circumstances have placed us. To be enabled to perform our various duties we ought to pay attention to the laws of health, otherwise it is almost impossible to preserve equanimity and self-possession, or that influence of a healthy mind which is co-existent with a sound state of the body. No one can do his duty unless he knows what is his duty ; no one can maintain his

health unless he has learnt something about it and how to preserve it. We can hardly moot any question without stumbling on the fact that most of the evils of civilized life are the result of ignorance, and that education is the one thing needful to reach the blessing of a sound mind in a sound body. In using the term education we should not restrict it to a mere knowledge of facts nor to a well-stocked memory, which ought to be considered merely as means to an end, that end being such an increase of the capacity of the mind, its powers of thought and of judgment, as will best enable us to contend with the difficulties of life. The discipline of life answers the same purpose as education in developing the powers of our understanding, but good education and early discipline exempt us from much of that evil which goes under the name of experience. However, the best educated still require, more or less, the discipline of difficulty and of experience, which is, in point of fact, a kind of continuous education from the first development of mind to the very verge of the grave, adding to that stock of materials for reflection by which our intellectual and moral powers are ever on the increase. Our early education is merely the basis or foundation upon which it is the duty of every sound mind to rear, by its own exertions, that capacity for correct judgment which is the greatest gift of God to man, the possession of which is coupled with the condition that we can only obtain it by our own exertions. Every mind, as a general rule, is capable of development, although the order and degree of development is as various as the tempers of men. We should have no individuality or personality if we were all born perfect, but freedom of the will has been given us to work out our own independence, and to give us that feeling of responsibility for our actions which exists in the consciousness of every human being. Supreme wisdom and goodness has ordained that we must work out our own happiness here and hereafter, by making use of those mental conditions and capabilities which God has given to all mankind.

If it can be shown that so much depends on our own exertions, and that these can only be duly performed in a state of health, how clear it is that one most important duty of life consists in looking after our health. We may apply to medical advisers for

their opinion, but to carry out such advice often requires much strength of mind, only to be obtained by the exertion of our own mental faculties, for such is the perfection of God's gifts to man that the more we employ the mind in thought and reflection, the more we increase its power. The more deeply we search into our spiritual nature, the more reason we discover for the consolation of our inward spirit by the increased confidence of our faculty of faith in the justice, the wisdom, the goodness of God's government and providence. This is a subject that admits of great amplification, but, perhaps, I have said enough to show what my opinion is, not only of the value of health but of our duty in the study of it, which is not difficult but is within the reach of all, and, indeed, requires only the observation of our own interest and welfare. All the laws of health may be reduced to the observance of cleanliness and temperance ; no one can keep good health unless he keeps his skin clean ; no one can preserve his health without temperance in his appetites, his desires, and his passions.

All rules with regard to health of the body may be summed up in the word—moderation. To partake moderately of such things only as best agree with us is the golden rule of health. Hence arise two questions :—1. What does best agree with us ? 2. What constitutes moderation ? There are some general rules as to kinds of food ; mutton is more digestible than beef, veal, or pork ; plainly cooked food is better than highly seasoned for two reasons,—The stomach is not depraved by stimulants,—We are not tempted to eat so much. In weak stomachs bread should be substituted for all other vegetable matter, and the best bread is not only the most nutritious and the most easily digested, but the cheapest, because bread made from the best wheaten flour goes as far again as that made from inferior flour. All uncooked vegetables are indigestible ; some, as radishes, celery, cucumber, &c., never digest ; green vegetables, when well cooked, are useful adjuncts to meat. My space will not allow me to enter into particular rules of diet, every one must decide for himself the great point as to what agrees and what disagrees. The mode of life best suited for the circumstances under which we are obliged to live should be studied by every one who regards his own welfare.

Every individual has peculiarities in his stomach and digestive organs as well as in face, form, and limbs, and what agrees well with one will disagree with another. The old proverb that "Every one is a fool or a physician," is perfectly true so far as a personal knowledge of oneself goes, for we ought all so to study ourselves, our habits, wants, and peculiarities, as to be our own physicians at least until disease attacks us. All should learn to prevent disease by proper management of themselves and their families. In a well regulated state of society such knowledge as this should form part of every one's education, as it is at least as important to human welfare as a knowledge of the rule of three. What calamities might we not avert by such knowledge. Half the diseases of human life would be annihilated, and the other half made comparatively innoxious; for men, women, and children, who possess good average health will easily shake off diseases with which they may be attacked, while the lazy, the dirty, the debauched, the drunkard, and the glutton, readily fall a prey to epidemics or other diseases. What is scrofula but a diseased state of the whole system, more especially of the glands, engendered by gross inattention to the laws of health? Living in low damp situations, close confinement to the house, or to dirty courts, yards and gardens near dung heaps, or other stinking, decomposing matter, long residence in places where the fresh air seldom blows, in valleys or other places defended from invigorating winds, having stagnant water under our bed-room windows, the constant inhalation of the bad air of such places together with dirty habits and bad food, will engender scrofula in the children of the most healthy parents. This, in an aggravated form, is the result of negligence of the laws of health; in a minor degree the same causes produce similar effects though less severe, many fevers and other illnesses being produced by effluvia from decomposing agents. To many persons the neighbourhood of a market garden is bad, for the quantity of manure in constant use and the perpetual decomposition of vegetable refuse, makes it no better than a large dung heap. The bank of a tidal river, where for many hours you are exposed to the effluvia from the mud, is equally productive of bad health, especially if combined with the influence of a poor or improper diet. Our marshes are less productive of agues than

they were, not only because drainage is more attended to, but the diet of all classes is improved. In the present day the poorest classes get more wholesome food than they did even twenty years back ; the bread and potatoes are of a better kind, and other articles of food are within the reach of a larger number of people. Civilization and knowledge should chase away such diseases altogether, and as men progress in wisdom so will bad health diminish.

What is moderation ? here again it is almost impossible to lay down a general rule, every one must learn for himself how much food he really requires. The stomach itself may be our guide for if it gives us much sensation of its existence we may suspect something is wrong in the quantity or the quality of our food ; we ought not to feel full after eating, we have taken too much if there is a desire to loosen our garments. Overfeeding, habitually indulged in, is as productive of disease as excess in drinking. An occasional full meal, under the influence of sociality, hurts no one, but if too frequently repeated lays the foundation of disease in the stomach, liver, or other organ connected with the process of digestion or the conversion of aliment into blood. On the same principle, under the very occasional influence of society, an unusual quantity of wine does no harm, but let this be too often repeated and disease of the liver, the kidney, &c., will be engendered. What feeds our hospitals with such innumerable cases of rheumatism, gout, paralysis, dropsy, kidney diseases, &c., but the immoderate use of beer and spirits. The following advice of Sir Walter Scott to his son, on joining the army, is worth all attention. " Drinking what is called a certain quantity every day hurts the stomach, and by hereditary descent yours is delicate. I am sorry and ashamed to say for your warning, that the habit of drinking wine so much practised when I was a young man, occasioned, I am convinced, many of my cruel stomach complaints. You had better drink a bottle of wine on any particular occasion than sit and soak, and sipple, at an English pint every day." The proper use of such things as wine, beer, and spirits, is one of the most important questions of the day, since there is a large party who argue that such things should not be used at all, because, in many instances they are abused. But if we discontinued

altogether the things which are too often abused, mankind would, I am afraid, be deprived not only of every amusement and relaxation, but of many of our best instructors ; even the printing press must be put under the ban of total abstinence. Wine, beer, and spirits, are grossly abused, and are the source of much of the misery which exists in all classes of society. Taken in excess they debase us below the brute creation ; they annihilate domestic happiness, and reduce thousands of men, women, and children to the lowest depths of vice and poverty ; indeed the latter may in this country be entirely traced to the immoderate indulgence in fermented drinks. Every industrious man in this country might make himself independent, if in his youth he abstained from the expense of drinking and smoking. We hear a good deal about the extension of the suffrage, but it would be easy to show that every one might make himself an elector by a very few years' abstinence of these worse than useless luxuries. In early life, generally speaking, water is the only drink that is really needed, up to the age of manhood few require fermented drinks at all, if they were entirely banished from use during the period of growth, it would be better for health, strength, and development, both mental and bodily. But when the body and mind become over-worked, as in this age and in this country is especially the case, where competition and numbers, render the task of providing for a family most difficult, they both require recruiting by something beyond ordinary food. There are many who can get through a large amount of work, mental as well as corporeal, without any stimulant whatever ; such persons are wise in abstaining from their use altogether, but a large number of persons could not get through the ordinary duties of life without a moderate amount of stimulating drink.

We revert to the question, what is moderation ? And the only answer must be as small a quantity as is requisite for the purposes of health and strength, and which must vary with circumstances. I believe spirits to be unnecessary except as medicine, and that the world would be a very much better world if it were impossible to get an ounce of distilled spirits but from a medical prescription. Abstinence from gin, brandy, &c., would prevent much indigestion, and greatly reduce the number of nervous

invalids, render organic diseases less frequent, and deprive medical men of half their patients ! The evils denounced by temperance societies against the use of spirits are perfectly true and sufficient to warrant total abstinence from their use, but with regard to beer and wine it is another question. All candid observers must come to the conclusion that a moderate use of good beer and good wine is, in numerous cases, beneficial rather than otherwise, but the articles must be good and the quantity moderate. One, two, or three glasses of wine, that is from two to six ounces, and from half-a-pint to a pint of beer daily, is as much as most people can require, and only one or the other should be taken at the same meal. As mere nourishment neither beer nor wine are necessary, but where there are such calls on the mental powers as in modern society, the influence of a moderate quantity of stimulation becomes necessary to maintain a due amount of nervous energy.

Nothing can more strongly exhibit the benefits to be derived from sanitary measures than the relative results of the two attacks of cholera in 1849 and in 1854, during both of which I had charge of the same district of St. Martin's parish. In 1849 the proportion of cases of cholera to those of diarrhœa was 25 per cent. and of deaths 10 per cent., while in 1854 of 874 cases of diarrhœa, not more than 20 were choleraic, and only one death occurred. In the interval, between 1849 and 1854, the *Guardians* had adopted every means to remove nuisances, to cleanse drains, to destroy cesspools, to purify courts, yards, &c. The supply of water to the very poorest houses has been most ample, and all sources of pollution, of smell, and of disease, are speedily removed. Among the most important sanitary measures must be included the establishment of baths and washhouses. This practical example of the advantages of mere cleanliness must impress all with its importance, and if perfect cleanliness both of the person and the habitation could be fully carried out, epidemic diseases of all kinds, not excepting cholera, would lose more than half their virulence. If all those who from necessity are compelled to live in close situations would pay strict attention to cleanliness, they would improve their own health and that of their children. Keep rooms clean by frequently washing the floor,

make the air clean by open doors and windows, make the skin clean by a warm bath once a week, and we shall have much less disease to contend with. Those who work at noxious trades, whose skin and lungs necessarily imbibe particles of dust and dirt, should more frequently take a warm bath. The mass of our people do not sufficiently take advantage of the baths and wash-houses,—the greatest boon that justice and benevolence have yet given to our town population. There is no one greater source of health and happiness than clean skins and clean clothes, these are luxuries now within the reach of all, but the real value of which are, as yet, too little estimated, and our baths and wash-houses too little appreciated.

The subject of Hygiene is intimately connected with the great problem of the age, how to elevate the religious, moral, and social condition of the labouring classes : there is good reason to believe that if we improve their physical condition we lay a proper foundation for the rest. How can a man be religious or moral unless he respects himself, and how is it possible for men and women to respect themselves while they live in habitations, and under circumstances, no better than the brute creation ; indeed, our horses and oxen have better and cleaner habitations than many of our people. No person upon whose mind the principles of Christianity has made a deep impression, and who looks forward to a realization of its promises, can be satisfied that he has done his duty, if he possesses any degree of power to elevate the moral and mental condition of his fellow men, and has neglected to do so. If there is any one truth more fully developed by Christianity than another, it is that the elevation of the spiritual part of our nature is the essential object of human existence. Have we succeeded by our educational establishments in any degree proportionate to our wishes and expectations ? Is the religious and moral condition of the working classes, either in town or country districts, as much improved as the efforts to teach would warrant ? I am afraid none who know how the labouring classes spend their lives, can answer such questions to their own satisfaction. The best friends of public education must admit the slow and disproportionate advance of the end to the means. Our religious and educational establishments have taken effect

among the higher and middle classes, both of which have wonderfully improved in mind and morals during the last century, but it is very doubtful whether the large masses of the population have at all improved. May not this failure depend on the physical and material debasement of the great element of social civilization, the labouring class. Until the whole population can respect themselves by having, not only decent clothing, but clean and healthy homes, and more than one room for a whole family, until this can be done I fear our religious and educational establishments are vain, in regard to their influence on the largest class, and that which most needs them. Men, women, and children, cannot be religious and moral unless they are clean and healthy, unless their homes are purified from the elements of moral and physical debasement. Hence we arrive at the conclusion, that Hygiene, or the art of preventing disease, by raising the physical condition of the people, is one important element in the regeneration of modern society.

